9-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.297" (20 holes) as per Dwg D3391

8-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.250"

DO NOT OPEN 2 MOST FWD WEARPLATE HOLES

(10 holes) as per Dwg D3391

| | NCR: Yes / No | | | | | | | | | DQA: | | ate: | | | |
|---|--|---|--|------------------------------|--------|---|-----|--------------------|--|-----------------------------|---|---|------------------------|------|---|
| NCR: | Yes | / No | | | | WORK ORDER NON- | COI | NFORM | AANCE / UP | DATE | | QA Closed: | | ate: | 942 * |
| | | | | | | <u> </u> | | | · | | - | | | ate. | |
| Work Orde | er: | | | | | DISPOSITION | | | | AGAINST [| Œ | PARTMENT | /PROCESS | | |
| Part f | • | | ************************************** | | | Rework Scrap | | ľ | Skid-tube Machining | Crosstube Small Fab | | 4 | Water Je | r | Engineering Quality |
| NCR I | No. | | | | | Use-as-is Work Order Update |] | | noforming Large Fab | Finishing Composite | | Rec/Sto | re/Packagin Supplie | _ | Other |
| Root | | | | | Descri | ption of work order update | | Initial | Ac | tion | | Sign & | | | |
| Cause | | Date | Step | Qty | (| or Non-conformance | Ct | nief Eng | Desc | ription | | Date | Verificati | on | QC Inspector |
| Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved | | | | | | | | | | . | - | | | | |
| | | | | | | | AUI | LT CATE | GORY | <u> </u> | _ | · | · | | |
| Landi | ng (| Bending Centre No Cracks Crushed/ Cuffs | Crimped | ntric to | o/s | General Bend BOM/Route Broken/Damaged Burrs Contamination | | Instruct Mainte | on Incomplete ions Incomplete/ nance | Unclear | | Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved | ssing | | Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled |
| | Cause Date Step Qty Compared Compared | | - | Countersink Cut Too Short | | Mislabe Misread | | - | | Positioned V Power Loss/ | _ | Г | Other | | |

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

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| October-16-13 | 10:33:00 AM | | | |).) | | | | <u> </u> |
|--|---------------------------|--|--|--------|--|---------------------|------------|-------------------|------------------------------|
| Item ID: Revision ID: Item Name: | D3391-023 Mid Tube Ass | embly | | Accept | *N900 | 040100 |)* ፡ | Setup Start Stop | *NS1* *NS2* |
| Start Date: Required Date Reference: | 10/16/13 | Start Qty: 1.00 Req'd Qty: 1.00 | *1* *1* | | Cust Item I | ID: | | | |
| Approvals: | | ın: | | | | ate: | 1 | Run Start Stop | *NR1* *NR2* |
| Sequence ID/ Work Center I | D | IN- Transfer remaining for dia hole, usi transfer drille le Using D wearplate hole wearplate hole le Open 10 insert D insert The insert The le ON FIR as per | orderill one fwd saddle wd saddle holes using ng t-pins and clicos to red pilot holes in D339 or T8217, locating from the pilot holes in D3391-021. If the pilot holes in D3391-021 using the pilot holes in D3391-021 using the pilot holes in D3391-021 into D3391 or pins into first and the pilot on D3191 or pins into first and the D SIDE ONLY drill | -23 | r drill all sly drill .188" en up previusly (3391-021 ill remaining emaining 6 | Tool # Plan Code | Accept Qty | Qty | Reject Insp. Number Stamp |

| | | | | | | | | | | | DQA: | Date: | • |
|---------------|------|-----|------|--------|----------------------------|--|--------|---------|--|---|------------|---|---------------------------|
| NCR: Ye | es / | No | | | | WORK ORDER NON- | | VFORM | MANCE / UP | DATE | QA Closed: | Date: | 443 |
| Work Ordei | r: | | | | | DISPOSITION | | | | AGAINST DE | PARTMENT | /PROCESS | |
| 1 1 1 | | | | | | Rework Scrap Use-as-is Work Order Update | | Therm | Skid-tube Machining noforming Large Fab | Crosstube Small Fab Finishing Composite | | Water Jet d. Eng. Coor. re/Packaging Supplier | Engineering Quality Other |
| Root | | | | Descri | ption of work order update | I | nitial | Ac | tion | Sign & | | | |
| Cause | D | ate | Step | Qty | (| · · · · · · · · · · · · · · · · · · · | | ief Eng | Desc | ription | Date | Verification | QC Inspector |
| Doc/Data | | | | | | - | | | | | | | |
| Equip/Tooling | | 1 | | | | | | | | | | j i | |
| Operator | | | | | | | | | | | | | |
| Material | | | | | | | | | | | | | † . |
| Setup | | i | | | | | | | | | | | |
| Other | | ļ | | į | | | | | | : | | | |
| Process | | | | | | | | | | | | | * |
| Supplier | 7 | | | | | | | | | | | | |
| Training | | İ | | | | | | | | | | | |
| Unapproved | | | | | | | | | | | | | |
| | | | | | | F | ΑUL | T CATE | GORY | | | | |

| Landing | Gear | General | | _ | | | | |
|---------|------------------------------|----------------|---|---------------------------------|---|----------------------|---|--------------------|
| | Bending | Bend | | Grain | | Ovalized | Г | Pressure/Forced |
| | Centre Not Concentric to O/S | BOM/Route | | Hardware | | Over/Under tolerance | | Temperature/Cure |
| | Cracks | Broken/Damaged | | Inspection Incomplete | Г | Part Incorrect | | Weld |
| | Crushed/Crimped | Burrs | | Instructions Incomplete/Unclear | Г | Part Lost/Missing | | Wrong Stock Pulled |
| | Cuffs | Contamination | | Maintenance | | Part Moved | | _ |
| | Heat Treat | Countersink | | Mislabeled | | Positioned Wrong | | |
| | Inspection Strip in Tube | Cut Too Short | | Misread | | Power Loss/Surge | | Other |
| | Ripples in Bend | Drill Holes | Γ | Offset | | • | | |
| | Torque Waves in Extrusion | Drawing | Г | Out of Calibration | | | | |
| | Turning Sequence | Finish | | Out of Sequence | | | | |
| | Wave/Twist in Tube | Folio | Г | Outside Dimensions | | | | |

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| Work Order I | D 10834 | 1 |
|--------------|---------|---|
|--------------|---------|---|

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| Item ID: Revision ID: | D3391-023 | | | Accept | *N900 | 040 | 100 |)* s | etup Star | i Vi | S1* |
|--------------------------------|----------------------|------------------------------------|------------------------|----------------------|--------------------------|--------|--------------|---------------|---------------|------------------|----------------|
| Item Name: | Mid Tube A | ssembly | | | | | | | Stop | *N: | S2* |
| Start Date: Required Date: | 10/16/13 10/30/13 | Start Qty: 1.00 Req'd Qty: 1.00 | *1* *1* | | Cust Item I Customer: | D: | | | | | |
| Reference: | | | | | | | | | | | |
| Approvals: | Process P | lan: | Date: | Tooling: | Da | nte: | | R | tun Star | 1/1 | R1* |
| | QC: | | Date: | SPC (Y/N): | Da | ate: | | | Stop | *N | R2* |
| Sequence ID/ Work Center II | D | Operation Description | | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
| 110 | | QC5- Inspect part compl | eteness to step on W/O | 0.00 DAS | | | | • | | | |
| *11 0 * QC | | Memo | | 27 0.00 9-89 | ^ | | | | | | |
| Quality Control | | - | | 13-11-5 | | | | | | | |
| 120 | | Chemical Conversion Co | oat per QSI005 4.1 | 0.00 | | | | | | | |
| *120* HandFinish | | Memo | | 0.00 | | | | 13-1 | 11-B D | (c <u>/</u> . | |
| Hand Finishing | | v | | | | | | | | - | |
| 130 | | QC7-Inspect Chemical C | Conversion Coat | 0.00 | | | | |) , , | | , |
| *130* | | | | 0.00 | | | | TA | 13 | -//- (| 0 |
| QC Quality Control | | Memo | | 0.00 | | | | | | | |

| | | | | | | | | | | DQA: | Date: | |
|---|--|--|---------------------------------------|--------|---|----------|--|---|---|--|---|--|
| NCR: Y | es / No | | | | WORK ORDER NON-C | O | VFORM | AANCE / UP | DATE | , | | * |
| | | | | | | | | | | QA Closed: | Date: | |
| Work Orde | ır. | | | | DISPOSITION | ı | | | AGAINST DE | PARTMENT | /PROCESS | |
| Part N | lo. | | | | Rework Scrap Use-as-is Work Order Update | | t Therm | Skid-tube Machining noforming Large Fab | Crosstube Small Fab Finishing Composite | 4 | Water Jet d. Eng. Coor. re/Packaging Supplier | Engineering Quality Other |
| Root | | | | Descri | ption of work order update | | nitial | Act | tion | Sign & | | |
| Cause | Date | Step | Qty | | or Non-conformance | Ch | ief Eng | Desci | ription | Date | Verification | QC Inspector |
| Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved | | | | | | | | | | | | |
| | ng Gear | | · · · · · · · · · · · · · · · · · · · | | General F | AUL | T CATE | GORY | | | | <u>-</u> |
| | Bending Centre I Cracks Crushec Cuffs Heat Tro | Not Conce I/Crimped eat on Strip ir | | o/s | Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short | | Instruct Mainte Mislabe Misread | on Incomplete ions Incomplete/i nance iled | Unclear | Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/ | ct ssing Vrong | Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other |
| | Ripples Torque | in Bend Waves in I | Extrusio | n | Drill Holes Drawing | \vdash | Offset Out of (| Calibration | | | | |

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

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| October-16-13 | | | · | *1()8: | 341* | | | | ** | | | Page 4 | |
|--------------------------------|--------------|--|--------------------------------|---------------------------------------|------------------|------------|--------------|---------------|--------------|--------------|------------------|----------------|----|
| Item ID: Revision ID: | D3391-023 | | , | Accept | *N900 | 040 | 100 |)* | Setup | Start | *N | S1* | |
| Item Name: | Mid Tube Ass | embly | | | | | | | | Stop | *N: | S2* | |
| Start Date: | 10/16/13 | Start Qty: 1.00 | *1* | | Cust Item II | D : | | | | | | | |
| Required Date: | 10/30/13 | Req'd Qty: 1.00 | *1* | | Customer: | | | | | | | | |
| Reference: | | | | | | | _ | | _ | C 4 4 | | | |
| Approvals: | Process Pla | n: | Date: | _ Tooling: | Da | te: | | | Run | Start | <i>"\V</i> | R1* | |
| | | | Date: | _ SPC (Y/N): | Da | | | | | Stop | *N | R2* | |
| Sequence ID/ Work Center II | D | Operation Description | | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | t Rej Qty | ject y | Reject Number | Insp. Stamp | |
| 140 | | | | 0.00 | | | | | | | | | |
| *140* Skidtubes | | Skidtubes Memo | | 0.00 | | | | | | | | | |
| Skidtubes | | 2-C'sink floa 3- Prepare tu 4-Bond web Adhere for 1 A/R Sikafley batch#: 12 | x exp: <u>14-1-25)</u> -110 | 91 & QSI 015. O IN AFT END OF TUBE | 13-11-6 | Da | ish. | | | | Á | SE is | |
| 150 | | QC5- Inspect part comple | eteness to step on W/O | 0.00 | | | | | | | | - 1 (A) | ~* |

150

Quality Control

Memo

0.00

| NCR: Y | 'es / 1 | lo | | | WORK ORDER NON-C | CON | FORM | MANCE / UPDATE | | | | * |
|---------------|---|--------------|------------|----------------|------------------------------|---------|---------------|-------------------------|-------------------------------|----------------|--------------------------------------|---------------------------|
| | | | | = | | | | _ | | QA Closed: | Date | <i>*</i> |
| Work Orde | er: | | | | DISPOSITION | | | AGA | NINST DI | EPARTMENT, | PROCESS | |
| Part N | lo | i. | | | Rework Scrap Use-as-is | | ľ | ч —і | stube Fab shing | - i | Water Jet d. Eng. Coor. re/Packaging | Engineering Quality Other |
| NCR N | lo | . 4 | | · | Work Order Update |] | | Large Fab Comp | osite |] | Supplier | |
| Root | | | | Descri | iption of work order update | In | itial | Action | | Sign & | | |
| Cause | Da | te Step | Qty | | or Non-conformance | Chie | ef Eng | Description | | Date | Verification | QC Inspector |
| Doc/Data | | | | | | | | | | | | |
| Equip/Tooling | | | | | | | | | | | | |
| Operator | | | | | | | | , | | | | |
| Material | | | | | | | | | | | | |
| Setup | | | | | | 1 | | | | | | |
| Other | | | İ | | | | | | | | | |
| Process | | | | | | | | | | | | |
| Supplier | | | | | | | | | | | | 1 |
| Training | | | | | | | | | | | | |
| Unapproved | | | | | | | | | | | | |
| | | | | | F | AULT | CATE | GORY | | | | |
| Landi | ng Gear | | | _ | General | _ | | | _ | _ | _ | _ |
| • | Bend | ing | | | Bend | Ш | Grain | | | Ovalized | | Pressure/Forced |
| | Cent | re Not Cond | entric to | o/s | BOM/Route | <u></u> | Hardwa | re | | Over/Under | tolerance | Temperature/Cure |
| | Landing Gear Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube | | | Broken/Damaged | | nspecti | on Incomplete | | Part Incorred | ct | Weld | |
| | Crus | ned/Crimpe | ed | | Burrs | | nstruct | ions Incomplete/Unclear | | Part Lost/Mi | ssing | Wrong Stock Pulled |
| | Cuffs | | | | Contamination | | Mainte | nance | | Part Moved | | |
| | Heat | Treat | | | Countersink | | Mislabe | led | | Positioned V | Vrong | |
| | Insp | ection Strip | in Tube | | Cut Too Short | | Misreac | | | Power Loss/ | Surge | Other |
| | Ripp | es in Bend | | | Drill Holes | | Offset | | _ | | | |
| | Tora | ue Waves i | n Extrusio | n [| Drawing | \Box | Out of (| Calibration | | | | |

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

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| Work Orde October-16-13 | | | | *10 | 8341* | | | | | * · · · · · · · · · · · · · · · · · · · | | Page 5 |
|---|----------------------|------------------------------------|--------------------------------------|-------------------------------|--------------------------|--------|--------------|--------------|--------------|---|--|----------------|
| | D3391-023 | | | Accept | *N900 | 040 | 100 |)* | Setup | Start | 14. | S1* |
| Item Name: | Mid Tube Ass | sembly | | | | | | | | Stop | *N: | S2* |
| | 10/16/13 10/30/13 | Start Qty: 1.00 Req'd Qty: 1.00 | *1* *1* | | Cust Item I Customer: | D: | | | | | | |
| Reference: | | | | | | Data | | | Run | Start | -J- S - I - I | - 4 -4- |
| Approvals: | Process Pla | an: | Date: | _ Tooling: | Date: | | Kuli | Stop | *N | R1* | | |
| Revision ID: Item Name: Mid Start Date: 10/ Required Date: 10/ Reference: Approvals: Pr Q Sequence ID/ Work Center ID 160 *160* Skidtubes Skidtubes | QC: | | Date: | _ SPC (Y/N): | D: | ate: | | | | эсор | *N | R2* |
| Work Center II | D | Operation Description | | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accep Qty | t Re Qt | • | Reject Number | Insp. Stamp |
| *160* | | Skidtubes Memo | , | 0.00 | | | | | . | | ~+ 48~ · · · · · · · · · · · · · · · · · · · | |
| Skidtubes | | 1-Weld cros 2-grind weld | sbolt spacer as per dwg D i flush | 3391 & QSI 004 <i>PA/r</i> | RM126325 13/10/07 | BE | 13-11. | 07 | | | | |
| 170 | | QC10- Inspect visual per | r QSI004- ground welds | 0.00 | , | | | | | | | |
| *170* QC Quality Control | | Memo | | DA: 27 0.00 9-8: パ ん | • | | | } | | | | |

180

180

Quality Control

Memo

QC5- Inspect part completeness to step on W/O

0.00 DAS 27 0.00 9-89

| | | | | | | | | | | | DQA: | Date | e: | • |
|---|--|------|------|---|--------|--|--|------------|--|---|-------------|---|---------------|---------------------------|
| NCR: Y | ⁄es | / No | | | | WORK ORDER NON- | COI | NFORM | MANCE / UPDA | ATE | | | | *** |
| , | | | | · | | | | | | | QA Closed: | Date | e: | |
| Work Orde | er: | | | | , | DISPOSITION | | | | AGAINST DE | PARTMENT | /PROCESS | | |
| | ٠ ١٥٠ | | | | | Rework Scrap Use-as-is Work Order Update | | t Therm | Machining noforming | Crosstube Small Fab Finishing Composite | 4 | Water Jet d. Eng. Coor. re/Packaging Supplier | | Engineering Quality Other |
| Root | | | | | Descri | ption of work order update | | Initial | Action | n | Sign & | | \top | |
| Cause | | Date | Step | Qty | (| or Non-conformance | Cr | nief Eng | Descript | tion | Date | Verification | | QC Inspector |
| Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved | | | | | - | | | | | | | | | |
| | | | | | | | AUI | LT CATE | GORY | | | | | |
| Landi | Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat | | o/s | General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink | | Instruct Mainte Mislabe | on Incomplete ions Incomplete/Und enance eled | clear | Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V | ct issing Vrong | V V | Pressure/Forced Femperature/Cure Weld Wrong Stock Pulled | | |
| 1 | \vdash | | | rube | | Cut Too Short | L | Misread | 1. | l | Power Loss/ | Surge | \Box c | Other |

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

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| Work Orde October-16-13 | | | | *108 | 3.341* | | | | | | | Page 6 |
|---|------------------------|--|--|----------------------|--------------------------|------------|--------------|---------------|------------|---------------|----------|-------------------|
| Revision ID: | D3391-023 Mid Tube Ass | sembly | | Accept | *N900 | 040 | 100 |)* | Setup | Start Stop | *NS | • |
| Start Date: Required Date: Reference: | 10/16/13 10/30/13 | Start Qty: 1.00 Req'd Qty: 1.00 | *1* *1* | | Cust Item I Customer: | D: | | | | | | |
| Approvals: | Process Plan:QC: | | Date: | _ | | ate: | |] | Run | Start Stop | *NR | 1* 2* |
| Sequence ID/ Work Center II |) | Operation Description Pressure Wash per QSI0 | 05 4.3 | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Rej Qty | | | sp. amp |
| *125* HandFinish Hand Finishing | | Memo | ODINE AS PER PAR09 | 0.00 | | | | / | | L | 13-12-02 | NOK. |
| 190 *100* Powdercoat | | White Gloss(Ref:4.3.5.1) |) per QS1005 4.3-Alum <i>M/26 (</i>) | 99° .000 0.00 | | | | | φ | β | -129 | DAS 34 9-89 |

200

QC3- Inspect Part Finish

0.00

*ጋበበ

Powder Coating

Memo 0.00

Quality Control

lu f ll 14/00/120

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| | | | | | | | | | | | DQA: | Date | e: • | |
|---|---------|---|---------|----------|----------|---|----------|---|------------|------------|--|---|---|---|
| NCR: Y | 'es | / No | | | | WORK ORDER NON-C | ON | IFORN | MANCE / UP | DATE | 0.1.01 | 5 . | خ. | |
| | | ··· | | | - | | | | | | QA Closed: | Date | e: | |
| Work Orde | r. | | | | | DISPOSITION | | | | AGAINST DE | PARTMENT | PROCESS | | |
| Part N | - No | | | | | Scrap Machining Small Fab Use-as-is Thermoforming Finishing Work Order Update Large Fab Composite | | | | Finishing | 4 | Water Jet d. Eng. Coor. e/Packaging Supplier | Engineering Quality Other | - |
| Root | | | | | Descri | ption of work order update | 1 | nitial | Ac | tion | Sign & | | | |
| Cause | | Date | Step | Qty | (| or Non-conformance | Ch | ief Eng | Desc | ription | Date | Verification | QC Inspecto | r |
| Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved | | | | | | | | | | | | | | |
| | | | | | | | AUL | T CATE | GORY | | | A | | |
| Landi | | ear Bending Centre No Cracks Crushed/ Cuffs Heat Trea | Crimped | ntric to | o/s | General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink | | Grain Hardware Inspection Incomplete Instructions Incomplete/Unclear Maintenance Mislabeled | | | Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V | ssing | Pressure/Forced Temperature/Cui Weld Wrong Stock Pull | |
| | ⊢ | Inspection | | Tube | <u> </u> | Cut Too Short | \vdash | Misread | | - | Power Loss/ | | Other | |
| , | - | Ripples in | • | | | Drill Holes | Offset | | | | | | | |

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

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| Work Orde October-16-13 | | | | *108: | 341* | | | | | | Page 7 |
|--|------------------------|--|------------------------|---|--------------------------|--------|--------------|---------------|-----------------|------------------|---------------------------|
| Item ID: Revision ID: Item Name: | D3391-023 Mid Tube Ass | embly | | Accept | *N900 | 040 | 100 |)* s | etup Sta Sto | IV | S1* S2* |
| Start Date: Required Date: | 10/16/13 : 10/30/13 | Start Qty: 1.00 Req'd Qty: 1.00 | *1* *1* | | Cust Item l Customer: | ID: | | | | | |
| Reference: | Process Plan: QC: | | | Tooling: SPC (Y/N): | | ate: | | R | Run Sta Sto | | R1* R2* |
| Sequence ID/ Work Center II | D | Operation Description | | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. |
| *230 *230* HandFinish Hand Finishing | | HandFinishing Memo 1- press fit E 2-Install Inse | | 0.00 0.00 9416 starting from 0.500" sid | de | | | 1: | _{ | JL | <u>14/01</u> (21 |
| 240 | | QC5- Inspect part compl | eteness to step on W/O | 0.00 | | | | 1 | | | : DAS 25 14.01. |
| * 24 0* | | Memo | | 0.00 | | | | | | | *** ·7 01 |

250

250 Packaging

Quality Control

Identify as per dwg & Stock Location: (1)

0.00 O412.742-043/B110020 1x & M HOC/RC

Packaging

Memo

| | | | | | | | | | | | | DQA: | Da | te: | • |
|---------------|--------|--|---------|----------|--------|------------------------------|--------------------------|--------------|-------------------------------|-------------------------------|------------------|---------------|--|-----------------------|---------------------------|
| NCR: Y | es / | No | | | | WORK ORDER NON-C | CON | IFORN | /ANCE / UPI | DATE | | • | | • | 1, 4 |
| | | | | | | | | | | | _ | QA Closed: | Da | te: | • |
| Work Orde | ar. | | | | | DISPOSITION | | | | AGAINST D | ιEl | PARTMENT | PROCESS | | |
| Part N | | | | | | Rework Scrap Use-as-is | | ı | Skid-tube Machining noforming | Crosstube Small Fab Finishing | | i . | Water Jet d. Eng. Coor. re/Packaging | | Engineering Quality Other |
| NCR N | No | | | | | Work Order Update | | | Large Fab | Composite | | | Supplier | $\boldsymbol{\vdash}$ | |
| Root | | | | | Descri | ption of work order update | l i | nitial | Act | tion | ٦ | Sign & | | | |
| Cause | 0 | ate | Step | Qty | C | or Non-conformance | Chi | ief Eng | Desci | ription | | Date | Verificatio | n | QC Inspector |
| Doc/Data | | | | | | | | | | | | | | | |
| Equip/Tooling | | | | | | | | | | | | | | | |
| Operator | | | | | | | | | | | 1 | | | | |
| Material | | | | | | | | | | | | : | | | |
| Setup | | | | | | | | | | | | | | | |
| Other · | | | | | | | | | | | | | | | |
| Process | | | | | | | | | | | | | | | |
| Supplier | | | | | | | İ | | | | 1 | | | | |
| Training | | | | | | | | | | | 1 | | | | |
| Unapproved | | i | | | | | | | | | | | | | |
| | | | | | | F | AUL | T CATE | GORY | | | | | | |
| Landir | ng Gea | • | | | _ | General | | 1 | | | _ | • | | | • |
| | Ber | nding | | | | Bend | Ш | Grain | | | | Ovalized | | \square | Pressure/Forced |
| | Cer | itre No | t Conce | ntric to | o/s | BOM/Route | Ш | Hardwa | re | | | Over/Under | tolerance | \square | Temperature/Cure |
| | Cra | cks | | | | Broken/Damaged | Ш | Inspecti | on Incomplete | | | Part Incorred | ct . | | Weld |
| | Cru | shed/0 | Crimped | | | Burrs | Ш | Instruct | ions Incomplete/l | Unclear | | Part Lost/Mi | ssing | \bigsqcup | Wrong Stock Pulled |
| | Cut | fs | | | | Contamination | | Mainte | nance | | | Part Moved | | | |
| | He | Heat Treat Countersink | | | | | Mislabeled | | | | Positioned Wrong | | | | |
| | lns | Inspection Strip in Tube Cut Too Short | | | | | Misread Power Loss/Surge | | | | Surge | | Other | | |
| | Rip | ples in | Bend | | | Drill Holes | Offset | | | | | | | | |

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

| Work Orde | | | | *108341* | | | | | | | | | |
|---|-----------------------|------------------------------------|----------------------|----------------------|-------------------------|------------|--------------|---------------|--------------|---------------|------------------|----------------|--|
| Item ID: Revision ID: Item Name: | D3391-023 Mid Tube As | sembly | | Accept | *N900 | 040 | 100 |)* | Setup | Start Stop | | S1* S2* | |
| Start Date: Required Date: Reference: | 10/16/13 10/30/13 | Start Qty: 1.00 Req'd Qty: 1.00 | *1* *1* | | Cust Item ID: Customer: | | | | | | | | |
| Approvals: | Process Pl | an: | Date: | Tooling: SPC (Y/N): | | nte: | | | Run | Start Stop | | R1* R2* | |
| Sequence ID/ Work Center II | D | Operation Description | | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | t Rej Qty | - | Reject Number | Insp. Stamp | |
| *260 *260* QC | | QC21- Final Inspection | - Work Order Release | 0.00 | | | | | W | 14 | -01-2 | Z | |

Quality Control

| | | | | | | | | | | DQA: | Date: | • |
|---------------|-----------|----------|--|--------|----------------------------|---------------------------------|----------|---------------|--------------|------------------|--------------------|------------------|
| NCR: Y | es / No | | | | WORK ORDER NON-O | 100 | VFORM | MANCE / UP | DATE | QA Closed: | Date: | |
| | | | | | | _ | <u> </u> | | | QA Closed. | Date. | |
| Work Orde | r. | | | | DISPOSITION | | | | AGAINST DE | PARTMENT | /PROCESS | |
| WOIR Olde | | | | ***** | Rework | 1 I | | Skid-tube | Crosstube | 1 | Water Jet | Engineering |
| Part N | lo. | | | | Scrap | 1 | l. | Machining | Small Fab | Pro | d. Eng. Coor. | Quality |
| | : | | ··· ·· · · · · · · · · · · · · · · · · | | Use-as-is | 1 1 | | noforming | Finishing | 4 | re/Packaging | Other |
| NCR N | lo. | | | | Work Order Update | 1 | | Large Fab | Composite | 1 | Supplier | |
| | | | | 7 | | • | | - · - | • | - | | |
| Root | | | | Descri | ption of work order update | I | Initial | Ac | tion | Sign & | | |
| Cause | Date | Step | Qty | (| or Non-conformance | Ch | ief Eng | Desc | ription | Date | Verification | QC Inspector |
| Doc/Data | | | | | | | | • | | | | |
| Equip/Tooling | | | | | | | | | | | | |
| Operator | | | | | | | | | | | | |
| Material | | | | | | | | | | | | |
| Setup | | | | | | | | | | | | |
| Other | | | | | | | | | | | | |
| Process | | | | | | | | | | | | |
| Supplier | | | | | | İ | | | | | | |
| Training | | | | | | 1. | | | | | | |
| Unapproved | | , | | | | | | | * · | | | |
| , | | | | | F | AUL | T CATE | GORY | | | | |
| Landi | ng Gear | | | . 52 | General | | | • | · | - | | • |
| | Bending | | | | Bend | | Grain | | | Ovalized | | Pressure/Forced |
| ٠ | Centre No | ot Conce | ntric to | o/s | BOM/Route | | Hardwa | re | | Over/Under | tolerance | Temperature/Cure |
| | Cracks | | | | Broken/Damaged | _ | Inspecti | on Incomplete | | Part Incorre | ct | Weld |
| | Crushed/ | Crimped | | | Burrs | Instructions Incomplete/Unclear | | Unclear | Part Lost/Mi | ssing | Wrong Stock Pulled | |
| | Cuffs | | | | Contamination | Maintenance | | | | Part Moved | | |
| | Heat Trea | at | | | Countersink Mislabeled | | | | | Positioned Wrong | | |

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

1.50

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

October-16-13 10:33:03 AM

Work Order ID: 108341

108341

Parent Item:

D3391-023

D3391-023

Parent Item Name: Mid Tube Assembly

Start Date: 10/16/13

Required Date: 10/30/13

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP A05.10.20New Issue KJ/EC

IPP B06.02.10ECN773 dwg rev.D EC

rev F dwg EC IPP C 07.03.20 EC IPP D 07.03.28 re-format IPP E 07.10.31 ecn 1053P EC

IPP Rev:F ECN 1056 07-11-13 DD verified by: EC IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC

IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC

IPP Rev: I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP Rev:J add in seq 140 expire date &b# sikaflex DD 10.02.17 verified by:EC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| D2500-1-100 | | Manufactured | No | | | 100 | Each | 107.0000 | 1 | 1 | - | | |
| *D2500-1- Skidtube Extrusion | 100* | | | | | | | | ** | | mm | 13/ | 11/04. |
| | | | | Location | | <u>Loc</u> | <u>Otv</u> | Loc Code | | | | | |
| | | | | HALL | | | 107 | | | | _ | | |
| | | | | | 82373 | | 28 | | _ | \sim | _ | | |
| | | | | (| 86063 | | 79 | | | (1) | - | | |
| 03391-021 | | Manufactured | No | | | 100 | Each | 0.0000 | 1 | 1 | | | |
| *D3391-02 Fwd Tube Assembly | 71* ★ | | | 2 | 97640- | - | | | ** | (<u>)</u> | mn | n 13 | 11/04 |
| D3389-1 | | Manufactured | No | | 02467 | 140 | Each | 9.0000 | ì | 1 | | | |
| *D3389-1* | • | | | | | | | | ** | | - | | |
| | | | | Location | | Loc | <u>Oty</u> | Loc Code | | 6 | | | |

| Location | Loc Qty | Loc Code | <i>A</i> |
|-----------|---------|----------|-------------|
| LG 108410 | 9 | | DGL 13-11-6 |
| 104968 | 4 | | |
| 107590 | 4 | | |
| 85508 | 1 | | |

| | | | | | | | | | | DQA: | Date | . • . |
|---|---|--------------------------|------|------|--------|--|-------------------------|--|------------|--|---|--|
| NCR: Y | ⁄es | / No | | | | WORK ORDER NON-C | ONFO | RMANCE / UP | PDATE | | | , in |
| | | | | | | | | | | QA Closed: | Date | : |
| Work Orde | r: | | | | : | DISPOSITION | | | AGAINST DE | PARTMENT | /PROCESS | |
| Part N | - ۔ ۱o۰ | | | | | Rework Skid-tube Crosstube Scrap Machining Small Fab Use-as-is Thermoforming Finishing Work Order Update Large Fab Composite | | | | 4 | Water Jet d. Eng. Coor. re/Packaging Supplier | Engineering Quality Other |
| Root | | | | | Descri | ption of work order update | Initial | Ad | ction | Sign & | | |
| Cause | l | Date | Step | Qty | c | or Non-conformance | Chief En | g Desc | cription | Date | Verification | QC Inspector |
| Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved | | | | | | | | | | | | |
| | | | | | | General F | AULT CAT | EGORY | | | · · · · · · · · · · · · · · · · · · · | |
| Lanu | Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube | | | | | Bend BOM/Route Broken/Damaged Burrs Contamination Countersink | Instru Main Misla | vare ction Incomplete ctions Incomplete, tenance beled | /Unclear | Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V | ct issing Vrong | Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled |
| | \vdash | inspection Ripples in | - | iube | ļ | Cut Too Short Drill Holes | Misre Offse | ` | | Power Loss/ | ourge [_ | Other |

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

| Picklist Print October-16-13 10:33:03 AM | | | | | | | | | Page 2 |
|--|--------------|-----|-----------------|-----|---------|----------|--------------------------|-----|--|
| Work Order ID: 108341 | | *11 | 08341* | ·· | r | | | | |
| Parent Item: D3391-023 | | | 3391-023* | | | | | | |
| Parent Item Name: Mid Tube Asser | nbly | | | | | | rt Date: 1 art Qty: 1 | | Required Date: 10/30/13 Required Qty: 1.00 |
| D3681-1 | Manufactured | No | | 160 | Each | 189.0000 | 5 | 5 | |
| *D3681-1* | | | | | | • | ** | | BE13-11-07 |
| | | | Location | Le | oc Qty | Loc Code | | | |
| | | | LG | | 176 | | | | - |
| | | | 101754 | | 3 | | | | _ |
| | | | (102202) | | 131 | | | 5 | - |
| | | | 104856 93371 | | 40 2 | | | | - |
| | | | LG001 | | 10 | | | | - |
| | | | 68958 | | 2 | | | - | - |
| | | | 69893 | | 2 | | | | - |
| | | | 71845 | | 2 | | | | - |
| | | | 74874 | | 1 | | | | - - |
| | | | 76004 | | 1 | | | - | <u>-</u> |
| | | | 77501 | | 2 | | | | _ |
| | | | LG005 | | 3 | | | | _ |
| | | | 80361 | | 1 | | | | _ |
| | | | 87611 | | 2 | | | | - |
| D3591-1 | Manufactured | No | | | Each | 54.0000 | | 2 | h / / |
| *D2504 4* | | | | | | | ** | ~ H | 1 1/12/20 |

*1)3591-1
Bushing

Location Loc Oty Loc Code FG 10 92873 10 FP001 44 100699 44

| | | | | | | | | | | | DQA: | Date: | • |
|---------------|------------------------|------------|----------|------|------------|----------------------------|----------|---------|------------------|------------|---|---------------|--------------------|
| NCR: | ⁄es | / No | | | | WORK ORDER NON-C | ON | IFORM | MANCE / UP | DATE | | | <u>ب</u> |
| | | | | | | | | | | | QA Closed: | Date: | · |
| Work Orde | or. | | | | | DISPOSITION | | | | AGAINST DE | PARTMENT, | /PROCESS | |
| Work Orac | -''- | | | | | Rework | | | Skid-tube | Crosstube | | Water Jet | Engineering |
| Part N | No. | | | | | Scrap | | | Machining | Small Fab | Pro | d. Eng. Coor. | Quality |
| | - | | | | | Use-as-is | | | noforming | Finishing | 1 | re/Packaging | Other |
| NCR I | No. | | | | | Work Order Update | | | Large Fab | Composite | | Supplier | |
| | | | | | | | | | | | | | |
| Root | | | | | Descri | ption of work order update | l l | nitial | Ac | tion | Sign & | | |
| Cause | | Date | Step | Qty | (| or Non-conformance | Ch | ief Eng | Desc | ription | Date | Verification | QC Inspector |
| Doc/Data | Ш | | | | i i | | | | | | | | |
| Equip/Tooling | | | | | | | | | | | | | |
| Operator | Ш | | | | | | | | | | | | |
| Material | | | | | | | | | | | | | |
| Setup | Ш | | | | | | | | | | | | |
| Other | Ш | | | | | | | | | | | | |
| Process | Ш | | | | | | İ | | | | | | |
| Supplier | Ш | | | | | | | | | | | | |
| Training | Щ | | | | | | | | | | ļ | | |
| Unapproved | | | L | | <u> </u> | _ | | | | | <u> </u> | | |
| | | | | | | | AUL | T CATE | GORY | | <u></u> | | |
| Landi | | ì | | | | General | | l : | | | 1 | <u> </u> | lo /5 (|
| | - | Bending | | | ~ <u> </u> | Bend BOM/Route | \vdash | Grain | | - | Ovalized | | Pressure/Forced |
| | | | | | | BOM/Route | \vdash | Hardwa | | - | Over/Under | | Temperature/Cure |
| | Cracks Crushed/Crimped | | | | | Broken/Damaged | \vdash | | ion Incomplete | Linelaar | Part Incorre | | Weld |
| | _ | | crimped | | <u> </u> | Burrs | \vdash | | ions Incomplete/ | Unclear | Part Lost/M Part Moved | issing | Wrong Stock Pulled |
| | \vdash | Cuffs | | | <u> </u> | Contamination | \vdash | Mainte | | <u> </u> | 4 | Managa | |
| | \vdash | Heat Trea | | Tubo | <u> </u> | Countersink Cut Too Short | \vdash | Mislabe | | | Positioned Wrong Power Loss/Surge Other | | Othor |
| | | Inspection | เบรเสทาท | une | | IUUL 100 SDOTT | Misread | | | | rower inss/ | auree I | HUMBET |

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

October-16-13 10:33:04 AM

Work Order ID: 108341

Parent Item: D3391-023

Parent Item Name: Mid Tube Assembly

108341
D3391-023

Start Date: 10/16/13

**

Required Date: 10/30/13

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130

Purchased

No

230

Each

3,676.000

20

20

14/01/26

AI S4-1032-130

**ALS7-1032-130*

| Location | Loc Qty | Loc Code | |
|-----------------|---------|----------|-----|
| FP001 | 389 | | |
| 119084 | 116 | | |
| 120671 | 89 | | |
| 120807 | 36 | | |
| 120837 | 8 | | |
| 121269 | 140 | | |
| ST279 | 40 | | |
| 124080 | 40 | | |
| st510 | 1247 | | |
| 124163 | 160 | | |
| M12610 | 9 1087 | | 120 |
| st555 | 2000 | | |
| M12702 | 8 2000 | | |

| | | | | | | | | | | | DQA: | Date: | • |
|---------------|-----------------------|-------------|------------|----------|---------------|----------------------------|------------------|----------|---------------|------------|--------------------|---------------|------------------|
| NCR: | /es | / No | | | | WORK ORDER NON- | 100 | NFORN | // IANCE / UP | DATE | | | |
| | | - | | | | | | | | 100.00 | QA Closed: | Date: | ` |
| Work Orde | sė. | | | | | DISPOSITION | | | | AGAINST DE | PARTMENT | /PROCESS | |
| WOIK OIG | - | | | | | Rework | 1 | | Skid-tube | Crosstube |] | Water Jet | Engineering |
| Part I | No. | | | | | Scrap | 1 | | Machining | Small Fab | Pro | d. Eng. Coor. | Quality |
| | - | - · · | | | | Use-as-is | 1 | | oforming | Finishing | Rec/Sto | re/Packaging | Other |
| NCR I | No. | | | | | Work Order Update | | | Large Fab | Composite |] | Supplier | |
| Root | | | | | Descri | ption of work order update | T | Initial | Ac | tion | Sign & | | |
| Cause | | Date | Step | Qty | | or Non-conformance | Cr | nief Eng | Desc | ription | Date | Verification | QC Inspector |
| Doc/Data | | | | | | | | | | | | | |
| Equip/Tooling | Ш | | | | | | | | | | | | |
| Operator | Ш | | | | | | | | | | | | |
| Material | Ш | | | | | | | | | | | | |
| Setup | | | | | | | | | | | | | |
| Other | Ш | | | | | | | | | | | | |
| Process | | | | | | | | | | | | | |
| Supplier | | | | | | | | | | | | | |
| Training | | | | | | | 1 | | | | | | |
| Unapproved | | | | | | • | | | | | | | |
| | | | | | | F | AUI | LT CATE | GORY | | | | |
| Landi | ng G | ear | | | | General | | _ | | | - | | |
| | | Bending | | | | Bend | L | Grain | | | Ovalized | | Pressure/Forced |
| | | Centre N | ot Conce | ntric to | o/s | BOM/Route | | Hardwa | re | | Over/Under | tolerance | Temperature/Cure |
| | | Cracks | | | · [| Broken/Damaged | | Inspecti | on Incomplete | | Part Incorre | ct | Weld |
| | Crushed/Crimped Burrs | | | | | Instruct | ions Incomplete/ | Unclear | Part Lost/M | issing | Wrong Stock Pulled | | |
| | Cuffs | | | | Contamination | | Mainte | nance | | Part Moved | | | |
| | | Heat Trea | at | | | Countersink | | Mislabe | led | | Positioned V | Vrong _ | |
| | | Inspectio | n Strip in | Tube | | Cut Too Short | | Misread | 1 | | Power Loss/Surge | | Other |
| | | Ripples in | n Bend | | | Drill Holes | | Offset | | | _ | | |

Out of Sequence

Outside Dimensions

Turning Sequence

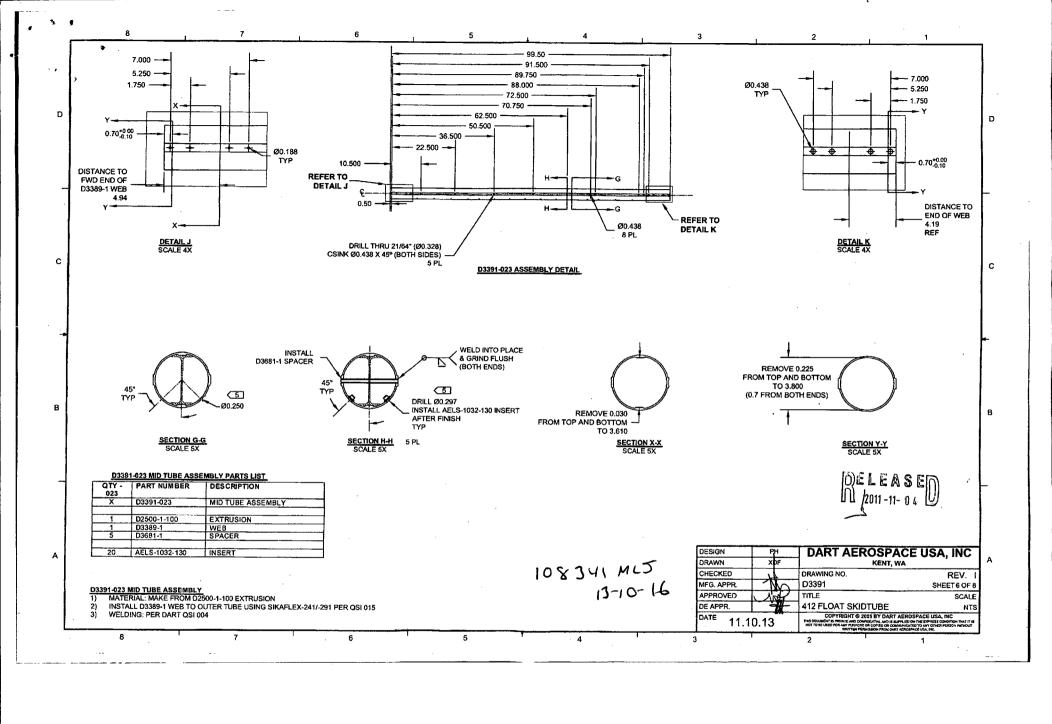
Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G



| | | | | | | • | | | | | | DQA: | Date: | • . |
|---------------|------|---------|------|-----|--------|--------------|----------------|------------|------|-------------|------------|------------|---------------|-----------------|
| NCR: Y | 'es | / No | | | | WORK (| ORDER NON- | CONFO | RN | IANCE / UPI | DATE | | | • |
| | | | | | | | · | | | | | QA Closed: | Date: | |
| Work Orde | er: | | | | | DI | SPOSITION | | | | AGAINST DE | PARTMENT | /PROCESS | |
| | _ | | | | | | Rework | 7 | 9 | Skid-tube | Crosstube | 1 | Water Jet | Engineering |
| Part N | lo. | | | | | | Scrap | 1 | | Machining | Small Fab | Pro | d. Eng. Coor. | Quality |
| | - | | | | | | Use-as-is | 1 The | erm | oforming | Finishing | Rec/Sto | re/Packaging | Other |
| NCR N | No | | | | | Work | Order Update |] | l | Large Fab | Composite | | Supplier | |
| | | | | | | | | l | | | | , | | |
| Root | | | | | Descri | ption of wor | k order update | Initia | - 1 | Act | tion | Sign & | | |
| Cause | | Date | Step | Qty | | or Non-confo | ormance | Chief E | ng | Desci | ription | Date | Verification | QC Inspector |
| Doc/Data | | Ť | ٤ | | | | | | | | | | 1 | |
| Equip/Tooling | | | 1 | | | | | | 1 | | | | | 1 |
| Operator | | | | | | | | | | • | | | | |
| Material | | | | | | | | | | | | | | |
| Setup | | | | | | | 1 | Ì | | | | | | |
| Other | | | | | | | | t | ļ | | | | | |
| Process | | | | | | | | | 1 | | | | | |
| Supplier | | | | | | | | | | | | | | |
| Training | | | | | | | | | | | | | | |
| Unapproved | | | | | , | | | | | | | | | |
| | | | | | | | F | AULT CA | ATEG | GORY | | | | |
| Landi | ng G | ear | | | | G | eneral | | | | | _ | | - |
| | | Bending | | | | Bend | | Gra | in | | | Ovalized | | Pressure/Forced |
| | 1 1 | | | | | Indada . | | 1 1 1 | | | | 1 | [| l |

| | Deliulig | l perio | 'ـــــــــــــــــــــــــــــــــــــ | Grain | Jovanizeu | i ressure/roiceu |
|---|------------------------------|----------------|--|---------------------------------|----------------------|----------------------|
| | Centre Not Concentric to O/S | BOM/Route | | Hardware | Over/Under tolerance | Temperature/Cure |
| | Cracks | Broken/Damaged | | Inspection Incomplete | Part Incorrect | Weld |
| | Crushed/Crimped | Burrs | | Instructions Incomplete/Unclear | Part Lost/Missing | Wrong Stock Pulled |
| | Cuffs | Contamination | | Maintenance | Part Moved | |
| | Heat Treat | Countersink | | Mislabeled | Positioned Wrong | _ |
| [| Inspection Strip in Tube | Cut Too Short | | Misread | Power Loss/Surge | Other |
| [| Ripples in Bend | Drill Holes | | Offset | | |
| | Torque Waves in Extrusion | Drawing | | Out of Calibration | | |
| | Turning Sequence | Finish | | Out of Sequence | | |
| | Wave/Twist in Tube | Folio | | Outside Dimensions | , | |

NO. 327

AWS D17.1.2001 QUALIFICATION TEST RECORD

| Name: Barclay Elliott | |
|------------------------------------|---|
| Job #: 104694 0 | _ |
| Part #: <u>D3391-013</u> | |
| Description: 49 skid tube Mid tube | _ |
| Welding Process: Tig[→ Mig[] | |
| Base materiel: Aluminium | |
| Current: AC[DC] | |

ST REQUIREMENTS AND RESULTS

| Visual: | pass[// fail[] |
|-------------------------|------------------|
| Incomplete Penetration: | pass[4] fail[] |
| Incomplete Fusion: | pass[] fail[] |
| Cracks: | pass[\mu] fail[] |
| Overlap (cold lap) | pass[// fail[] |
| Undercut: | pass[// fail[] |
| Pin holes: | pass[/] fail[] |
| Porosity (surface): | pass[/] fail[] |
| Coloration: | pass[fail[] |
| Burn through: | pass[4] fail[] |

Qualifier 09 Date of Test Coupon 13-08-22

Welder Ravlay Chart Date of Test Coupon 13-08-22

The above named individual is qualified in accordance with AWS D17.1.2001 to weld